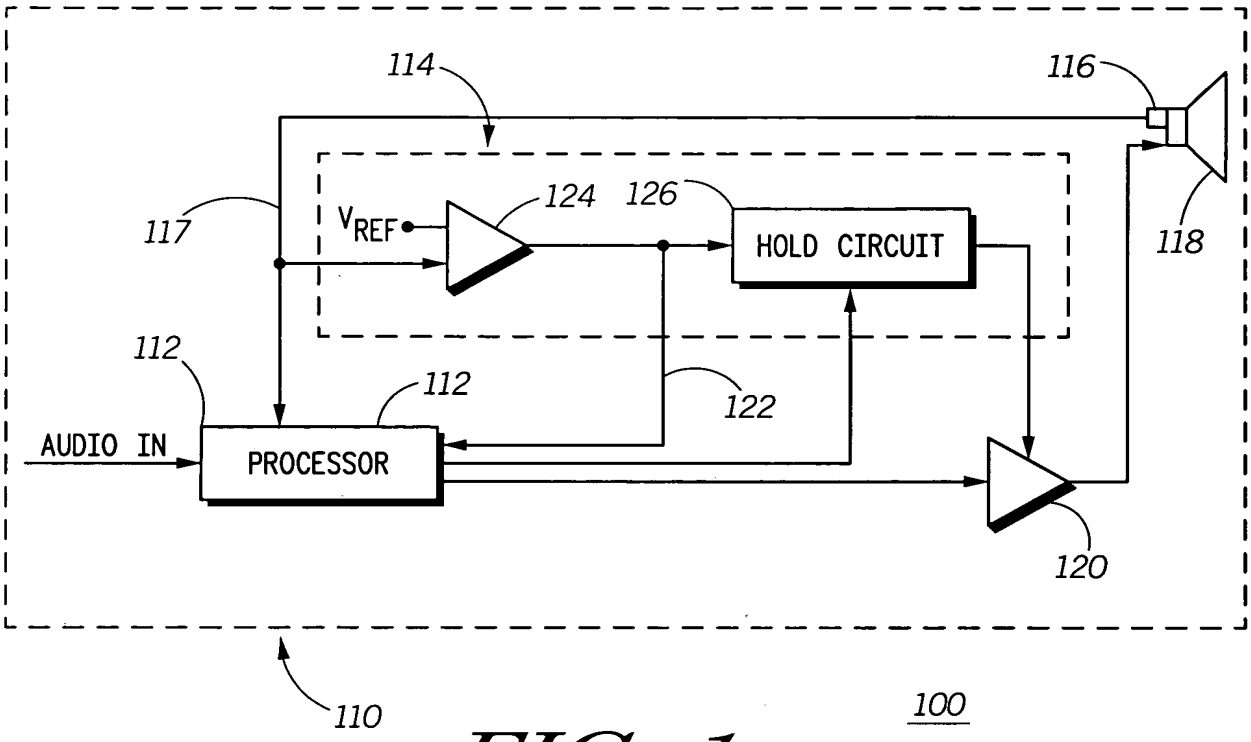
114
116
117
V_{REF}
124
126
HOLD CIRCUIT
118
112
112
122
AUDIO IN
PROCESSOR
120
110
100

FIG. 1

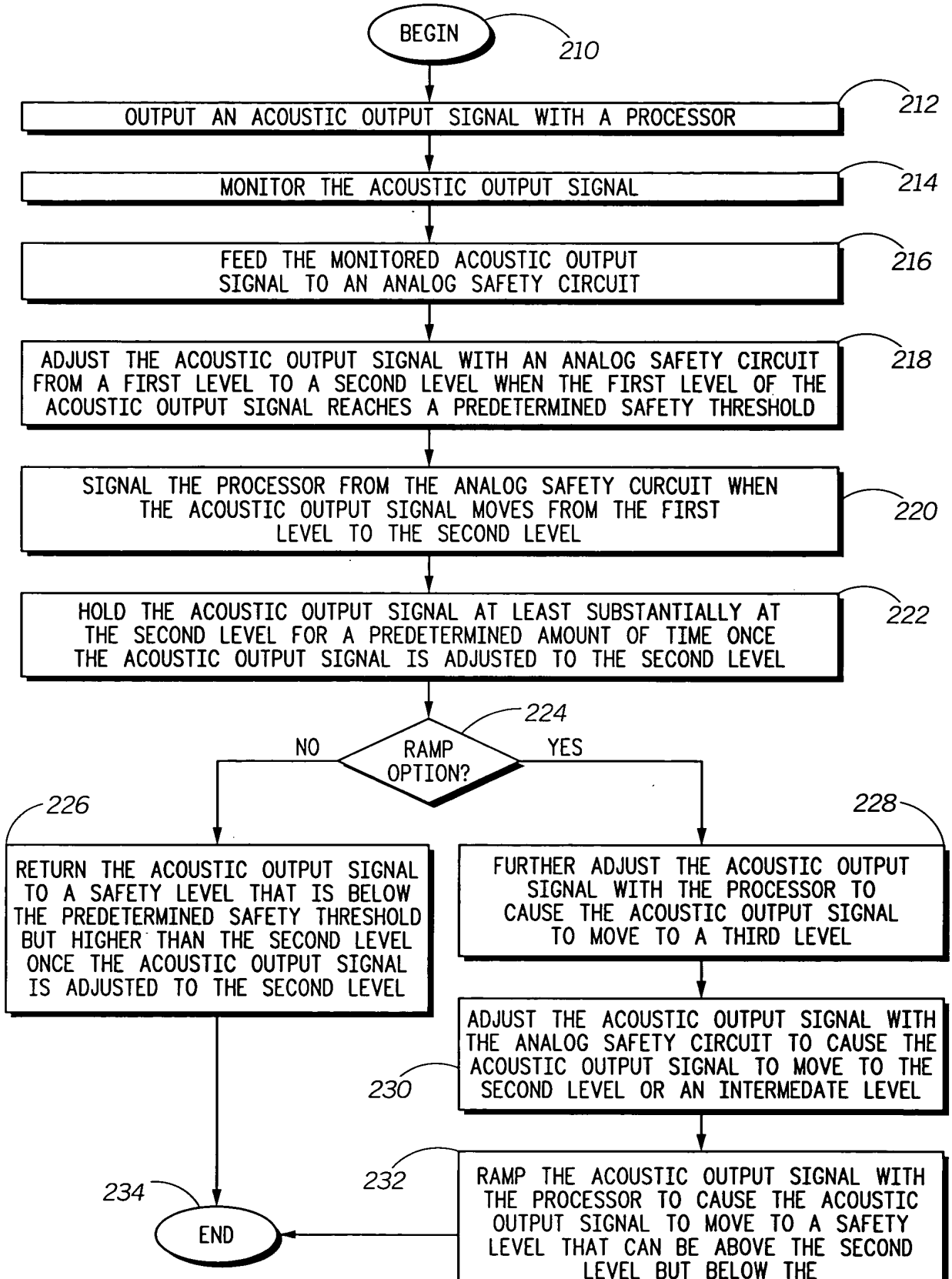
BEGIN
210
OUTPUT AN ACOUSTIC OUTPUT SIGNAL WITH A PROCESSOR
212
MONITOR THE ACOUSTIC OUTPUT SIGNAL
214
FEED THE MONITORED ACOUSTIC OUTPUT SIGNAL TO AN ANALOG SAFETY CIRCUIT
216
ADJUST THE ACOUSTIC OUTPUT SIGNAL WITH AN ANALOG SAFETY CIRCUIT FROM A FIRST LEVEL TO A SECOND LEVEL WHEN THE FIRST LEVEL OF THE ACOUSTIC OUTPUT SIGNAL REACHES A PREDETERMINED SAFETY THRESHOLD
218
SIGNAL THE PROCESSOR FROM THE ANALOG SAFETY CURCUIT WHEN THE ACOUSTIC OUTPUT SIGNAL MOVES FROM THE FIRST LEVEL TO THE SECOND LEVEL
220
HOLD THE ACOUSTIC OUTPUT SIGNAL AT LEAST SUBSTANTIALLY AT THE SECOND LEVEL FOR A PREDETERMINED AMOUNT OF TIME ONCE THE ACOUSTIC OUTPUT SIGNAL IS ADJUSTED TO THE SECOND LEVEL
222
224
RAMP OPTION?
NO
YES
226
RETURN THE ACOUSTIC OUTPUT SIGNAL TO A SAFETY LEVEL THAT IS BELOW THE PREDETERMINED SAFETY THRESHOLD BUT HIGHER THAN THE SECOND LEVEL ONCE THE ACOUSTIC OUTPUT SIGNAL IS ADJUSTED TO THE SECOND LEVEL
228
FURTHER ADJUST THE ACOUSTIC OUTPUT SIGNAL WITH THE PROCESSOR TO CAUSE THE ACOUSTIC OUTPUT SIGNAL TO MOVE TO A THIRD LEVEL
ADJUST THE ACOUSTIC OUTPUT SIGNAL WITH THE ANALOG SAFETY CIRCUIT TO CAUSE THE ACOUSTIC OUTPUT SIGNAL TO MOVE TO THE SECOND LEVEL OR AN INTERMEDATE LEVEL
230
232
RAMP THE ACOUSTIC OUTPUT SIGNAL WITH THE PROCESSOR TO CAUSE THE ACOUSTIC OUTPUT SIGNAL TO MOVE TO A SAFETY LEVEL THAT CAN BE ABOVE THE SECOND LEVEL BUT BELOW THE PREDETERMINED SAFETY THRESHOLD
234
END
200

FIG. 2

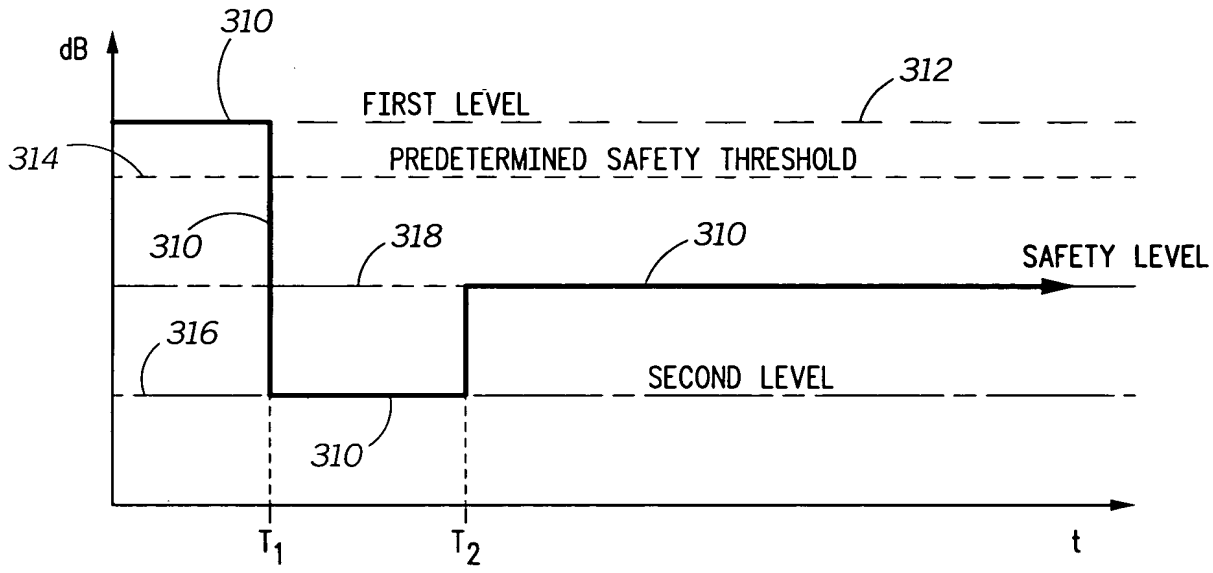
dB
310
312
FIRST LEVEL
314
PREDETERMINED SAFETY THRESHOLD
310
318
310
SAFETY LEVEL
316
SECOND LEVEL
310
T1
T2
t
300

FIG. 3

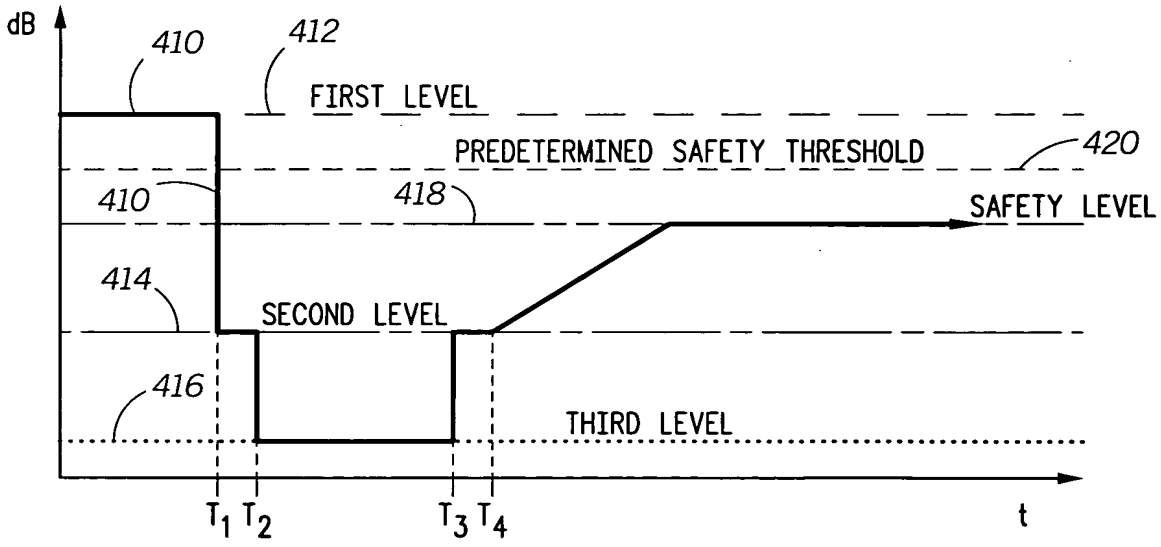
dB
410
412
FIRST LEVEL
PREDETERMINED SAFETY THRESHOLD
420
410
418
SAFETY LEVEL
414
SECOND LEVEL
416
THIRD LEVEL
T1 T2
T3 T4
t
400

FIG. 4

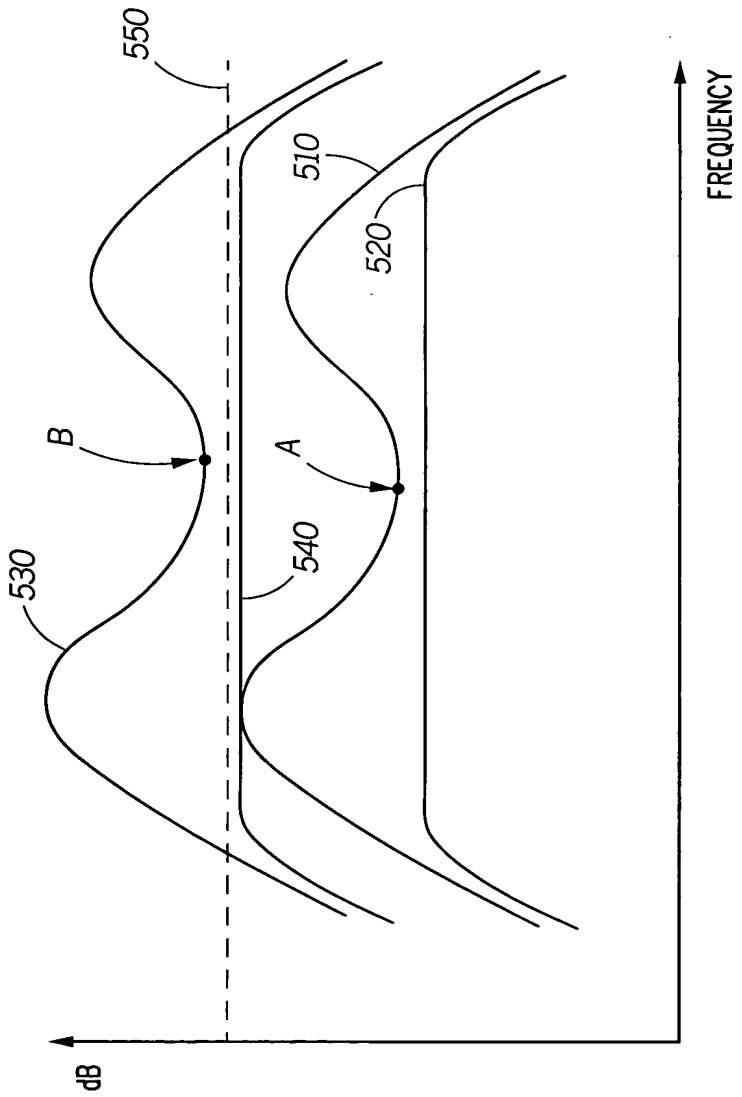

FIG. 5